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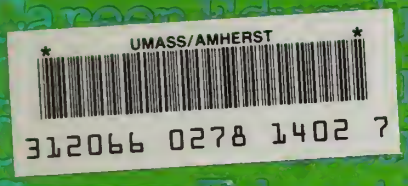

A Massachusetts Career Education Guide to Strategies, Activities and Resources

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A MASSACHUSETTS CAREER EDUCATION GUIDE

TO

STRATEGIES, ACTIVITIES AND RESOURCES

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THE INSTITUTE FOR GOVERNMENTAL SERVICES, founded in 1970, is a linking agency between the University of Massachusetts and state and local governments in the commonwealth. It brings academic expertise and practical experience to bear on issues affecting these state and local agencies through the provision of training, technical assistance, publications and research.

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CHAPTER I

INTRODUCTION

An elementary class goes on a trip to the zoo. Back at school each student chooses one job he or she has observed and writes a short composition. After grading the papers, the teacher leads a discussion on the papers and their content.

In a junior high school, math students are given a data sheet on women scientists and instructed to do various computations on salaries. The teacher leads a follow-up exercise to discuss the results of the calculations and their implications.

Both of these descriptions represent teacher-designed career education activities. In the first example, the teacher used a common elementary school activity, a field trip to the zoo, as a vehicle for students to practice writing and to learn about a variety of jobs. In the second example, the mathematics teacher combined a lesson on data analysis with career awareness and an exploration of effects of sex-role stereotyping. In both examples students learned basic skills while simultaneously acquiring information about the world of work.

These examples show that career education activities fit naturally into ongoing curriculum topics and regular school activities. With a little imagination and some basic understanding of career education concepts, all teachers can infuse career education into their classroom.

The purpose of this guide is to provide teachers with some of the basic tools they need to infuse career education into their classrooms. A word of caution--this is not a comprehensive curriculum guide. There are many such publications available and we refer to them in the various resource sections. Rather, the purpose here is to present an overview or road map for teachers to use in designing their own approach to career education. We include:

- an introduction to career education concepts essential to curriculum building;
- sample strategies and techniques for curriculum infusion;
- guidelines for developing lesson plans;
- examples of teacher-designed career education activities by grade level and subject area; and
- listings of resources for specific curriculum areas.

The Career Education Concept

Career education in Massachusetts is defined as "an effort aimed at refocusing education and the actions of the broader community in ways that will help individuals acquire and utilize the knowledge, skills, and attitudes necessary for each to make work a meaningful, productive, and satisfying part of his or her way of living."

This means that career education represents a comprehensive approach to attaining one of education's most important goals--preparation for work. The main thrust of career education is to provide all students with the skills and attitudes necessary for adapting to change when they leave school and enter the world of work.

Career education will enhance all of the basic goals of education by adding a new dimension of relevance to academic disciplines. Most importantly, when career education is implemented, nothing need be deleted from current programs. Career education contains additive, not subtractive factors.

Basic to the career education concept is that implementation involves a *comprehensive, sequential, developmental, infused* approach. *Comprehensive* means career education is provided for all students at all grade levels. *Sequential* and *developmental* mean that career education skills, knowledge, and attitudes are taught in a sequenced continuum based on the maturation level of students. Thus, each career education concept is introduced at one grade level, developed at another, and emphasized at yet another. Finally, *infused* means that career education concepts are taught within academic disciplines. Career education should not be a separate course or program, but rather it becomes a part of all subject matter.

Why Career Education Now?

In the next few years Massachusetts schools and teachers must find ways to cope with the problem of tighter budgets, declining enrollments, teacher lay-offs, and more demands to improve the quality of education for all students including those with special needs. One response to this situation, a demand for a return to the "basics," has already surfaced. Consequently, programs considered "frills" are being eliminated. Such a climate hardly seems conducive to the introduction of another new program such as career education.

Yet, career education, if implemented through the infusion approach, is not really a new program. Many teachers are already "doing" career education but just not calling it such. If anything, past experience shows that career education will help rather than hinder efforts at improving education during a time of budget cuts. The advantages in using career education as an approach include:

- increased learning and retention rates in the basic skill areas for students who have been exposed to infused career education activities;

- better utilization of free and available school, family, and community resources by legitimizing their use within the school career education curriculum;

- better integration of guidance and counseling services as counselors work with teachers and students to explore ways to relate school experiences and work; and

- increased teacher interest and morale as they find new ways to make their subjects interesting and relevant to students and themselves.

Career education does not claim to be a panacea for the problems schools and teachers face. It can, however, if approached with a sense of adventure, inquiry, and willingness to experiment, open new avenues of helping better prepare students for life in the 21st century.

How to Use the Guide

This guide contains seven chapters including the introduction. Chapters II-III give an overview of concepts basic to career education curriculum design for all grade levels. Chapters IV-VI highlight special considerations for developing curriculum at the elementary, junior high, and senior high level. Each of these chapters contains sample lesson plans for the different subject areas. Chapter VII describes career education activities for specific target student groups including non-traditional occupational exploration, limited English-speaking, special needs, and disadvantaged students.

CHAPTER II

GUIDELINES FOR CAREER EDUCATION CURRICULUM DEVELOPMENT

Curriculum development for career education is a flexible process. It can be approached as either a comprehensive curriculum rewriting process or on a more limited basis, focusing on specific career education concepts, subject area and/or grade level. While the comprehensive approach is the most desirable to assure full implementation of the developmental career education model, it is often not possible to devote the time and effort to such a task.

An alternative is to begin the curriculum development process on a smaller scale. At the elementary level, pick one subject area, or if you teach only one subject at the junior or senior high level, concentrate on a specific subtopic within your subject area. Review your lessons for these subjects or subtopic areas to see where career education concepts and activities can most easily be infused. Then begin rewriting your lesson plans to focus simultaneously on your subject matter or skill area objective and a career education objective.

This simultaneous incorporation or infusion of career education objectives with subject skill area objectives is the basis of successful career education curriculum development. However, a prerequisite to actually revising a lesson plan is that you must be familiar with the eight basic career education concepts. In turn, these concepts are adaptable to different grade levels and subject areas.

The purpose of this chapter is to describe and give examples of the basic career education concepts. In addition, it explains how these concepts vary with different grade levels and can be matched with different subject areas. Thus, this chapter provides you with the conceptual tools needed to begin career education curriculum development. Chapter III addresses the actual infusion process.

Career Education Concepts

Central to career education curriculum development are eight general concepts that are used as the model for student goals or outcome statements. Each of these represents one facet of the total career education concept. Ideally, all eight concepts should be used in a comprehensive curriculum development process. However, at first, you will usually choose just a few of these concepts to work with. Also, some of these concepts are more appropriate for certain age groups and subject areas. The eight career education concepts are:

1. *Appreciation and Attitudes:* This concept refers to developing students' appreciation of and positive attitudes toward possible career and life roles.

2. *Self-Awareness:* is concerned with the students' awareness of their own aptitudes, abilities and values, and their ability to relate this knowledge to possible career and life roles.

3. *Career Awareness:* refers to the students' awareness of the broad range of occupations and career patterns available to them.

4. *Educational Awareness:* refers to the students' awareness of the relationships between education and career and life roles.

5. *Economic Awareness:* is concerned with making students aware of economic processes and how they will relate to personal and societal goals, decisions, and actions.

6. *Skill Awareness & Basic Competence:* This concept concentrates on students' awareness of the relationship between skills and career/life roles and their competence in basic skills.

7. *Decision-making:* refers to students' understanding that decision-making includes responsible action in identifying alternatives, selecting the alternative most consistent with goals, and taking steps to implement a course of action.

8. *Employability Skills:* This concept is related to concept number 6. It refers to the students' development of employment skills applicable to their developing career pattern.

Developmental Curriculum Phases

The application of these concepts depends upon student grade and age level. To make it easier to adapt these concepts to particular age levels, career educators developed three curriculum phases which span kindergarten through twelfth grade. These phases are:

1. *Awareness:* spans kindergarten through sixth grade.

2. *Exploratory:* spans 4th through ninth grade.

3. *Preparation:* spans grades eight through twelve.

These phases correspond to the idea that in the earlier grade levels you introduce or create awareness about these concepts, in the middle grades you emphasize and encourage more in-depth exploration of the concepts, and at the high school level you help students apply these concepts toward more specific preparation for work. Thus, these curriculum phases provide a long-term developmental framework for the introduction, development, and emphasis

of each concept. As you will notice, the phases overlap one another. This is because there is no one particular time that students are ready to move from one phase or developmental level to another. You must use your own judgment about your students' maturation levels in deciding which of the three curriculum phases is most appropriate.

Knowing the concepts and curriculum phases brings you to the next step which is adapting the concepts to fit a particular curriculum phase or grade level. Figure 1 is a standard chart used by career educators to modify career education concepts for various grade levels and curriculum phases. This chart includes all eight career education concepts. Under each concept are more specific goals for each grade level related to that concept. As you read down a column under a specific concept, the goals become increasingly more oriented toward the final preparation curriculum phase. This chart should be helpful in deciding on specific goals for each grade level.

Matching Concepts to Subject Areas

So far you have concepts and curriculum phases. The next step is to match these concepts to a particular subject area. Ideally, any concept can be matched to any subject area, but in reality some subject areas are more easily and appropriately matched to certain concepts. It is easy to see, for instance, that the career education concept, Economic Awareness, could be easily matched with any grade level math or social studies class. The arts are easily matched with the concept of Appreciations and Attitudes, whether your class is in the language arts, music, or painting. As you read the sample activities in Chapters IV, V, VI, and VII, you will begin to see the interrelatedness of subjects and all career education concepts. Decision-making and Science, Employability and Music, Educational Awareness and Home Economics, Self-Awareness and Social Studies have great potential as matched pairs. Use your imagination, use the resource materials listed in this booklet if you need help or ideas, and refer also to the examples we have of program plans which have successfully operated in Massachusetts and elsewhere.

Screen Materials

Now that you are armed with the career education concepts, the curriculum phases, and a chart which shows you when to introduce, develop, and emphasize the eight career education concepts, we insert a word of caution. Students, particularly at the elementary level, pick up adult biases and are easily influenced by them. Be careful when you are choosing any materials for your lesson plans to screen them for sex, race, or religious stereotyping. In your discussions about life and career roles, be careful to avoid stereotyping. Remember, the overall goal for career education is to expand students' awareness of what they can be and do. Stereotyping by definition narrows options.

GOAL

CAREER EDUCATION CONCEPTS		APPRECIATIONS AND ATTITUDES	SELF AWARENESS	DECISION-MAKING	EDUCATIONAL AWARENESS
AWARENESS	K	Underatand the importance of each individual in the function of the home unit.	Understand the rights and responsibilities of the individual at home and school.	Become eware of cause and effact in making daciaions.	Be aware of rolea in the home and similar roles in the school.
	1	Learn to appreciate all individuals in the school setting.	Know the importance of "self" as an individual and as a worthy member of groups.	Be aware of the consequencee of personal decision-making.	Understand the similarities and differences between home roles and school roles.
	2	Be aware of the importance of getting along with other people.	Be aware of the capabilities and limitations of individuals.	Analyze alternatives to problems and ba able to express them verbally and in written form.	Relate basic skill development to life roles within the community.
	3	Realize the contribution of community members to the student and others.	Recognize attitudes towards learning tools and their value in achieving individual goals.	Idantify componenta of dacision-making process.	Understand the eimilarities and differences between life roles and learned skills.
	4	Be aware of the wage earner's job and how it affects the home unit.	Relate the mastery of educational skills to individual success.	Realize tha need for goale in life-atyle decisione.	Be awere of individual etrengtha and weaknessee as related to peer groupe.
ORIENTATION	5	Analyze working roles as to advantages and disadvantages.	Be aware of the individual's rights and responsibilities as a worker.	Apply decision-making procese to echool ralated problems.	Understand the relationships between the role of the individual, his environment and the roles of selected adults.
EXPLORATION	6	Understand the relationship between occupations and their growth and development.	Select career clusters as related to individual atrengthe and weaknesses.	Apply tha decision-making procese to home and eociel related problems.	Understand the relationshipe between people and their effect on the accomplishment of tasks.
	7	Appraciate all forms of human endeavor and work.	Choose career clusters as related to interests and abilities.	Weigh long and ehort range effecte of different alternativea to epecific problems.	Identify and underatand valuee as they relate to life-atyle.
	8	Understand the impact of work in one's life and resulting need to make a meaningful career choice.	Develop aelf-percaption of abilities and interests as related to actual career requirements.	Apply dacieion-making procaee to study of caraere.	Identify present life-atyle and conditions determining life-style.
	9	Relate attitudes and awareness to specific or related job clusters.	Build reality awereness perception of "where I am compared to where I want to be."	Analyze and refine previous career decisions based on counseling, work experiences and all available information.	Determine e tentetive pereonal achedule to ecquire necessary and desired special skills.
	10	Understand the importance of all careers and their contribution to society.	Relate personal values and influence of other's values on career choice.	Select a career cluater for in-depth analyais.	Acquire special skills needed for predicted or desired life-style.
	11	Make a commitment to the selection of a career based on individual attitudes, values and education.	Modify and/or accept differences between the individual's personal values and the influence of others on career choices.	Choose a tentetiva caraer.	Aseesa and implement a pareonal plan to obtain the necessery or required special skills.
	12	Understand the tasks required within chosen job cluster(s) and develop the specific skills needed.	Develop self-confidence in anticipated career choice.	Be awsre that career daciaions are flexible at the expense of time, effort and money.	Plan the acquisition of tha necessary skills remaining for e chosen lifa-style.

STATEMENTS

CAREER AWARENESS	ECONOMIC AWARENESS	SKILL AWARENESS, BEGINNING COMPETENCE	EMPLOYABILITY SKILLS
Know the jobs of home members and school personnel.	Identify within the home unit. What is available, needed, wanted, luxury.	Identify different tools for different careers.	Understand the need to share and cooperate to complete tasks.
Relate home and school jobs to community functions.	Be aware of the exchange of goods and services.	Be aware that school is a job that requires mastary of basic skills for success.	Acquire the ability to develop rules with others, accept direction and take responsibility.
Gain a knowledge of jobs necessary to maintain the community and their dependency on each other.	Understand the money exchange system vs. the barter system.	Understand the use of various communication tools and their effect on life-style and future career choice.	Identify styles of interaction that contribute to individual and group goals.
Compare local jobs to jobs in general.	Understand our monetary system.	Understand the use of additional tools and their effect on life-style and future career choice.	Understand how to resolve personal conflict between individual and group goals.
Group cluster jobs according to similarity of job performances.	Understand the process of production and distribution of goods and services.	Understand and master the use of tools for measurement and extension of energy in simple machines.	Participate in active groups in order to develop individual and group goals.
Understand the impact of career clusters on life-style.	Be aware of the law of supply and demand.	Participate in and understand the processes of mass production. Mastery of several measurement tools.	Understand how to relate the school environment to society at large and the need for structure and order.
Recognize abilities and skills required for various career clusters.	Understand that specialization creates an interdependent society.	Understand tools and processes used in research. Simple machines combined to produce complex machinery.	Identify the individual's role in society and its effect on incressed personal satisfactio and improved group achievement and morale.
Understand the relationships between attitudes and values and career clusters.	Develop the concept of management of finances (earning, spending, borrowing, savings).	Master the use of tools and processes used in research in the physical and social sciences. Understand use of tools in selected career clusters.	Understand the social and personal relationship and their effect on employment.
Understand the relationships between interests and abilities and career clusters.	Understand economic potential as related to career clusters, i.e., relate cost of entering a field to future expected income.	Use basic tools found in career clusters.	Relate personal and social interaction skills to career clusters.
Based on understanding of interests, values and abilities study career clusters. Survey courses in career clusters.	Understand the Tools of Business: Read and interpret tables, graphs, and charts used as a consumer.	Match necessary skills and processes with selected career clusters.	Understand the skills necessary to acquire, maintain and progress in employment.
Explore the career clusters in-depth based on interests, values and abilities. Gain planned work experience.	Relate legal and financial considerations to career clusters in general.	Match individual abilities and interests with skills and processes needed in career clusters.	Develop personal and social interaction skills related to in-depth study of one career cluster.
Identify necessary abilities required in selected career.	Understand the relationship of legal and financial considerations to a specific career cluster and personal and family matters.	Develop skills basic to the chosen career cluster.	Develop employability skills necessary for the anticipated job. Plan alternatives for job placement.
Reassess abilities, interests, and attitudes according to selected career and life-style. Determine further requirements needed.	Understand the financial and legal instruments that govern and protect the worker. Relate this to various roles assumed in the economy.	Master the skills basic to chosen career cluster and develop skills related to a specific job.	Explore at least three alternatives for job placement through work experience.

Summary

In developing curriculum and lesson plans that infuse career education, start by reviewing the eight career education concepts. Determine what curriculum phase is most appropriate for your students. Refer to the chart or adapt your own specific goals. Match these goals to what seems the most appropriate subject area. For more ideas about which concepts to match with what subject area, refer to Chapters III-VI.

CHAPTER III

BASIC INFUSION PROCESSES

> *Infuse; to steep or soak so as to extract flavor or other qualities; to fill (with a quality, feeling, etc.); imbue; inspire.*
>
> Webster's New World Dictionary

Infusion is not a new idea. Some teachers have been practicing it for a long time simply because they found that relating subject matter to the students' world is the most effective way of teaching. Infusion is also the most cost-efficient method of incorporating career education concepts into your curriculum because it eliminates the need for additional teachers, additional classroom space, and separate teaching time.

Basically, infusion means that you simultaneously integrate career education concepts into a lesson plan along with specific subject matter or skill objectives. As with the general curriculum guidelines outlined in Chapter I, infusion, too, is a flexible process. Depending upon how you structure an infused lesson, the career education concept you have chosen will play a major, minor, or equal role in the lesson.

Approaches to Infusion

Teachers who infuse career education into their lesson plans use a number of different approaches. We describe four of the most common approaches.

One approach is to *organize career education activities around the subject matter you are teaching.* For example, in a math class you are teaching students to find the area of squares or rectangles. An appropriate career education concept for this skill area would be "students develop an awareness of skills needed for certain jobs." Your infusion approach would be to have the students assume the role of carpenters. Their task is to decide how much flooring they will need for a given space. With this approach the primary emphasis is on learning the skill, finding the area of triangles and squares, and the secondary emphasis is on learning about skills carpenters need. This activity would also be appropriate for the career education concept, "educational awareness." Through the activity the students gain an understanding of the relationship of what they learn in school to what skills are needed for jobs.

Another approach is to *organize the subject matter around a specific career education objective.* This approach puts a stronger emphasis on the career education goals or concepts while the subject matter has slightly less emphasis. For example, you might choose the concept of career awareness and the specific goal, "each student will identify ten careers of some interest to him/her." In social studies, students would be encouraged to think of international careers or careers specific to living in a given

country being studied; in science, careers could include animal or human medicine, atronomy, psychology, research; or in math, careers in environmental engineering, architecture, construction, and cooking. Basically, this approach uses the specific subject area to provide the context or content for the career education objective.

Another alternative is the *unit or interdisciplinary approach*. With this approach the career education goals and subject area goals are equal partners. This approach is particularly appropriate at the elementary and middle grade levels. In the unit approach, you organize a "unit of study" which centers on a particular person, place, or thing. This unit becomes the focus for teaching students several different subject areas and career education concepts at the same time. For example, you could decide to study your school. The math part of the unit could include studying the economics of running the school for one year. In this part of the unit the students would learn simple budgeting skills and begin to understand basic economic principles. For communications, the students could interview the various employees and put together a book with job descriptions. Here they would practice listening and writing while also becoming aware of a variety of jobs in the school. Art and science could also be integrated into this unit.

The fourth approach again emphasizes the career education concepts and uses the subject area for context. This approach is the *career "clusters" approach*. The U.S. Office of Education has identified fifteen career clusters (see Appendix A). Each cluster contains many interrelated occupations that share some of the same skills and general knowledge, but have different educational requirements. In using the cluster approach, you choose any of the fifteen clusters that seems compatible with your specific subject area. This cluster becomes the focus for investigating the various skills and careers within the cluster. For example, a science teacher might choose the cluster Marine Science to complement classroom work on ocean and marine life. Students might be assigned to research the various jobs in this cluster and report back to the class. This type of infusion approach is an excellent way to help students learn about the relationship of school to careers. It also helps broaden students' knowledge of a wide range of careers requiring similar knowledge and skills.

These four approaches represent only a sampling of ways in which a teacher can infuse career education into his/her curriculum. Refer to the activities in Chapters IV-VI for more examples.

Techniques for Infusion

By techniques, we mean the actual classroom activities appropriate for an infused career education lesson.

For the most part, career education utilizes the same teaching techniques that teachers already use. See Figure 2 for a sample listing. The only difference might be that infusion techniques strongly emphasize student participation. This is because career concepts stress student involvement, awareness, and personal skill building. These things can only happen when students actively participate in the lesson.

Figure 2

SOME EXAMPLES OF TECHNIQUES TO FACILITATE
STUDENT CAREER DEVELOPMENT

-- brainstorming
-- films
-- discussions
-- developing bulletin boards
-- making student role books
-- creating listings of characteristics of self in relation to educational and occupational alternatives
-- analyzing student expectations
-- collecting newspaper articles or magazine stories
-- writing short themes
-- make up games about interests
-- make self-ratings
-- field trips
-- resource people
-- examine want ads
-- use work samples
-- work study
-- part-time work
-- panels
-- serve on committees
-- role play
-- do job analyses
-- debate
-- interview: workers, employers, employment service counselors, college admissions people
-- gaming
-- make a poster
-- library research
-- publish newspaper about career development concerns

From: Edwin L. Herr, "Better Guidance for the Individual," in Career Guidance, Practice and Perspectives, ed. by Gyslers, Drier and Moore. Worthington, Ohio: Charles A. Jones Publishing Co., 1973.

Two particularly successful infusion techniques are brainstorming and role playing. Both techniques are appropriate for all grade levels and can be adapted to work with all the career education concepts and most academic subjects.

Brainstorming is a communication strategy designed to elicit spontaneous feedback to a given verbal situation or problem. Brainstorming frequently is the forerunner of a discussion which exposes multiple responses to problems, topics, or goals.

Prior to a brainstorming session, you must explain the technique to the students, establish a time limit (up to 15 minutes), make provisions for recording the ideas given (newsprint, chalkboard, tape recorder, scribe), and establish guidelines regarding inclusion of all ideas without leader or group censure. During brainstorming sessions the leader needs to encourage spontaneous responses without comment as to worth or suitability to ultimate goal.

Students could brainstorm types of occupations as these major headings are recorded on the chalkboard:

- people who work indoors
- people who work outdoors
- people who work with machines
- people who work with ideas
- people who work for no wages
- people who work sitting down
- people who work at night
- people who work during the day
- people who work independently of others
- people who work in a group or interdependent situation

In order to evaluate the success of this technique, ask yourself: did all members of the group contribute? Was enough feedback given in order to continue another activity?

Role playing is an informal dramatization of a situation, problem, or story as presented by the teacher. It is similar to the play of young children because the action and dialogue are spontaneous and there is emphasis on pretending and imagining. It differs from play because the teacher initiates the ideas, sets the limits of the role play, and guides the participants and spectators toward particular objectives. Students are given a realistic situation that usually focuses on human relations at home, at school, and on the job. Students who do not participate are spectators. They observe and usually have instructions for viewing.

Prior to role playing you should examine your objectives: exploring feelings, exploring attitudes and values, developing problem solving skills. Select the situation which best reaches the objective. Help students realize

the need to explore solutions to problems in this manner. Interpret situation for students. Explain role playing procedures. Try to get volunteer participants and prepare the observers.

Students will role play a problem situation in a restaurant. Friends are eating together and upon completion of their meal the check is given to them by the waitress. The friends notice a $10.00 mistake in addition in their favor. What will they do? Call the waitress over and point out the error? Pay the bill quickly and leave before the mistake is caught? Call the manager and complain about the error?

In order to evaluate the success of the role playing technique ask whether the problem was identified. Was the problem discussed by students? Were the students aware of the procedure of role playing? Were the role players chosen and the setting described? Was there a discussion to prepare observers? Did the role play last long enough for a solution to be observed? Did the students have an opportunity to interact about what took place? Were you non-judgmental in the discussion? Were students able to generalize about the problem involved in the role play? Was this the most effective means of addressing human relations issues?

Summary

As this chapter has shown, infusion is neither a new idea nor difficult to do. The four most common approaches to career education infusion are: 1) organizing career education activities around the subject matter; 2) organizing the subject matter around a career education concept; 3) using a multidisciplinary unit approach; and 4) using the clusters approach. The actual techniques or activities for infusion are the same as most creative teachers already use. It is important, however, to use techniques that stress student participation. Two examples are brainstorming and role playing. For specific examples of these approaches and techniques in use, refer to Chapters IV-VII.

C H A P T E R I V

SAMPLE ACTIVITIES AND RESOURCES FOR ELEMENTARY LEVEL

The three curriculum phases presented in Chapter II, awareness, exploration, and preparation, correspond with human development stages. Although children mature at different rates, these phases are broad enough and flexible enough to reflect a fairly consistent development sequence. The first stage, awareness, applies to kindergarten through the sixth grade.

Career education for kingergarten and first grade students focuses on developing children's self-awareness. You should design activities which will enhance students' self-concepts and help children realize the importance of having and knowing their feelings. This sets the stage for assisting students in sharing feelings, developing interpersonal skills, and forming relationships. Role playing is very useful at this stage. Children's knowledge of occupations is often limited by their personal exposure to working people. By assisting children in observing working people in their immediate world, you can help establish the connection between personal fulfillment and life work fulfillment.

In the next two grade levels, as students' worlds expand, it is an ideal time to help them begin considering the uniqueness of all individuals. This includes learning about abilities, interests, and attitudes. You should encourage a sense of personal responsibility, strenghten social interaction skills, and increase students' awareness of their effects on people and the environment. At this age students are ready to broaden their knowledge of the world of work outside of their immediate family and school. Because children can now begin to identify the characteristics of careers, it is the appropriate stage for you to introduce the relationship between work in school and work after school.

In grades 4-6, you will still want to focus on the affective domain but you can increase the emphasis on interpersonal skills development and decision-making abilities. The student's ability to analyze, conceptualize, associate, compare, and estimate develops at this age. They can understand the idea of alternatives and exploring them. However, personal values are not yet secure. Students identify with their peer group. Its values provide a code by which students live while beginning to form their own value structure.

At this age students can begin to accept work as one of life's roles and understand the pros and cons of different careers. With an increasingly realistic attitude toward work, students can more easily differentiate between work and leisure and can more readily examine the relationships between all life roles. At this stage you can begin introducing activities that focus on the influences of the economy, environment, and government on the lives of individual members of society. This type of focus broadens students' awareness of the work world.

The purpose of career education at the elementary school level is to assist students in the process of understanding themselves and understanding their relationship to the world.

On the following pages you will find elementary level career education activities for different subject areas. The activities were chosen from successful career education programs operating in Massachusetts.

SAMPLE ELEMENTARY LEVEL CAREER EDUCATION ACTIVITIES

Subject	Career Concept(s)	Page
Math, Language Arts, Art	• Career Awareness	20
Music	• Career Awareness • Educational Awareness • Employability Skills	22
Art/Reading	• Self-Awareness • Career Awareness • Skill Development	24
Social Studies	• Appreciations and Attitudes	25
Science and Health	• Decision-making • Career Awareness	26
English	• Self-Awareness	27
Math	• Economic Awareness	30
Math/Science	• Decision-making • Employability Skills	32

DETAILS	Career Education Concept(s):
Subject Area: Math, Lang.Arts, Art	Career Awareness
Grade Level: Primary	
Curriculum Phase: Awareness	
Infusion Approach: Unit	

INSTRUCTIONAL OBJECTIVES

Students will be able to identify jobs of the people who work in the community and will be able to describe why a variety of workers is needed to provide services.

MATERIALS/RESOURCES

Paper
Crayons or paints
popsicle sticks and cloth scraps
rulers/measuring tapes
oak tag

PROCEDURES

A. Language Arts:

1. Visit a garage repair shop or shoe repair or any other shop where the children can see repairs being made, and, if possible, talk to the worker or workers.

2. Read and discuss stories where goods would be repaired.

3. Have students write story-pictures about a repair job.

4. Tell or write a story about something the student has repaired, and how it made him/her feel to accomplish this.

5. Make stick puppets of some repair workers - develop a puppet show around the theme of a repair worker's day.

6. Develop bulletin boards around occupations using the "before repair" and "after repair" theme.

PROCEDURES (continued)

7. Make a booklet of pictures around repair workers.

8. Keep a vocabulary booklet.

9. Discuss kinds of tools needed for various repair careers.

B. Math:

Time:

1. Shoes brought in for repair at 9 o'clock will be ready at 4 o'clock. How many hours will it take?

2. Use of calendar - days of the week. Example: A car brought in for repair on Saturday will be ready the next Thursday. How many days will it take?

Measurement: inches, centimeters (rods) or colored ribbons

1. Dressmaker - upholsterer - measuring of material

2. Telephone repair person - electrician - measuring wire needed

Word Problems:

1. Use a working situation in problems involving addition, subtraction, greater than, less than, counting, money, etc.

C. Art:

1. Construct simple moccasins from oak tag - sew or lace together.

2. Make model of automobile repair shop - tailor, etc.

This activity sheet is adapted from a program developed by the Education Cooperative.

DETAILS

Subject Area: Music

Grade Level: Intermediate

Curriculum Phase: Awareness

Infusion Approach: Organizing a subject area around career education concepts

Career Education Concept(s):

Career Awareness

Educational Awareness

Employability Skills

INSTRUCTIONAL OBJECTIVES

Students will be able to identify and discuss skills and requirements for successful employment in the music field.

MATERIALS/RESOURCES

newspaper reviews
library books
posters
Exploring Music Careers

PROCEDURES

1. Preparation: Meet with people who will visit the class to go over objectives, schedules, etc. Ask for comments/help in preparing students; i.e., what are good questions to ask, etc.

2. Invite a (well known) local performer to address the class. Find an ensemble with a conductor if possible. The artists present a mini-concert in the classroom. As a group, they demonstrate ensemble playing through a brief but varied repertoire.

3. Each artist demonstrates the particular qualities of his/her instrument, commenting on the demands it puts on an artist's professional life. Each artist circulates and discusses his/her resume commenting on the training necessary, lifestyles, and goals they have in mind.

PROCEDURES (continued)

4. The conductor working with all the artists helps the class discuss (set up) some of the major considerations necessary for a performance. Finally, divide the class into groups to explore various jobs which support the performer. These groups then report back to the class.

FOLLOW-UP ACTIVITIES

Follow-up: Arrange a visit to a concert/performance. Have students read the pages for upcoming events and plan for possible visit or interview of a performer.

This activity sheet is adapted from a program developed by the Educational Collaborative.

DETAILS

Subject Area: Art, Reading

Grade Level: Primary/Intermediate

Curriculum Phase: Awareness

Infusion Approach: Organizing a subject area around a career education activity.

Career Education Concept(s):

Self Awareness

Career Awareness

Skill Development

INSTRUCTIONAL OBJECTIVES

Students will become aware of their motivations, interests, strengths and abilities, likes and aspirations.

MATERIALS/RESOURCES

Manila folders or envelopes
Magazines, periodicals, hobby folders, newspaper, etc.
Scissors and paste

PROCEDURES

1. Students scan various magazines, newspapers, etc. for attractive ads depicting things they like to eat, wear, do, see, play at, work at, etc.

2. Have students cut out materials and paste on outside of folder or envelope.

3. Students use "Me Folder" to contain momentos of other "collectibles" about themselves, such as birthday cards, valentines, love letters, etc.

Variation: (for older children) Have students make collages of pictures representing careers of interest to themselves. The pictures might be of people working or of related tools, uniforms, and equipment. Suggest that students collect articles from newspapers and magazines that pertain to areas of occupational interest and keep the articles in their folders or envelopes.

This activity sheet is adapted from a program developed by TEC Del Estrine, Wayland, Massachusetts.

DETAILS

Subject Area: Social Studies

Grade Level: Intermediate

Curriculum Phase: Awareness

Infusion Approach: Organizing career education activities around the subject

Career Education Concept(s):

Appreciations and Attitudes

INSTRUCTIONAL OBJECTIVES

Students will be able to identify and discuss cultural differences.

MATERIALS/RESOURCES

Native foods from different countries
Examples of clothing, music or art from different countries

PROCEDURES

1. Have a class discussion on ancestors and roots--where each of us comes from.
2. List on the blackboard all of the different countries represented in the group.
3. Ask students for examples of customs practiced in each of the countries.
4. Each student pantomimes or acts out a particular custom of his/her country and students can try to guess what this is.
5. Each student can bring in a native food or piece of clothing from his or her country and share it with others in the class.

This activity sheet is adapted from a program developed by Fall River.

DETAILS

Subject Area: Science, Health

Grade Level: Intermediate

Curriculum Phase: Awareness/Exploration

Infusion Approach: Organizing career education activities around a subject area

Career Education Concept(s):

Decision-making

Career Awareness

INSTRUCTIONAL OBJECTIVES

When presented with a hypothetical emergency situation, students will be able to identify the appropriate action to take.

PROCEDURES

1. Invite an emergency medical technician to class to discuss his/her occupation. Discuss with students various emergency treatments (e.g., fractures, bee stings, cuts, nose bleeds, sunburn).

2. Divide the class into groups of five or six students. Each group decides on an injury to treat. They then discuss as a group steps necessary to treat the injury. One student per group acts as a recorder and writes down steps decided on by group.

3. Each group explains their first aid procedures to the rest of the class. Each group can also demonstrate procedures using a volunteer student.

This activity sheet is adapted from a program developed by Fall River.

DETAILS

Subject Area: English

Grade Level: Intermediate

Curriculum Phase: Awareness

Infusion Approach: Organizing a subject around a career education activity

Career Education Concept(s):

Self Awareness

INSTRUCTIONAL OBJECTIVES

Having discussed "What really makes me angry" with the class, each student will make personal "Don't you just hate...?" lists.

MATERIALS/RESOURCES

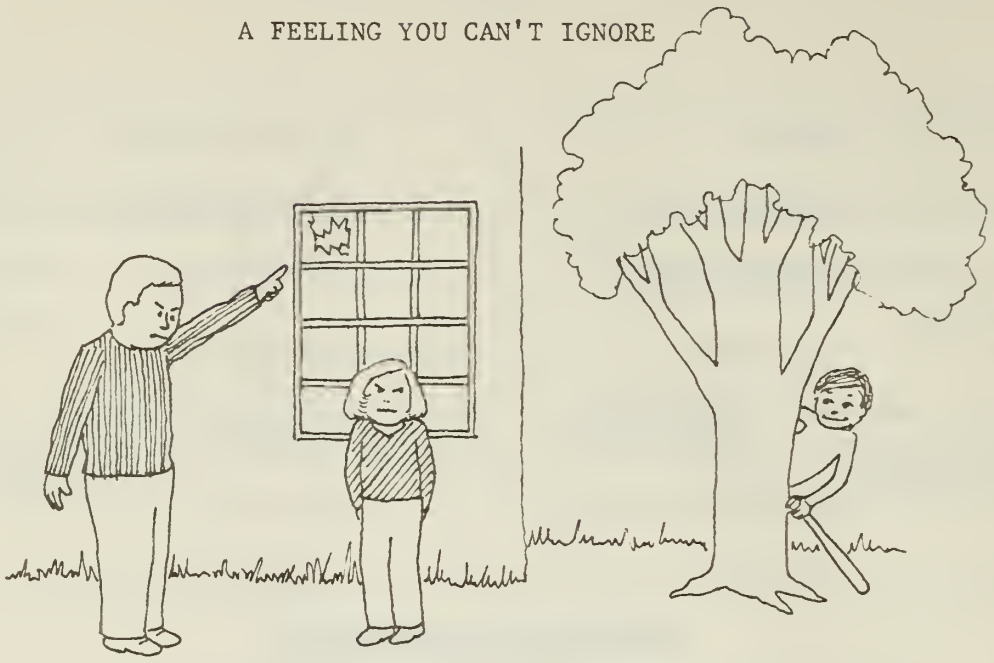
"A Feeling You Just Can't Ignore" worksheet

PROCEDURES

1. Discuss with the class "What really makes me mad." Complaints should move away from the individual to general irritating situations in the world. Give examples to make discussion more global and less personal.
   - gasoline shortages
   - extinction of wildlife
   - war and conflict
   - pollution
   - dishonesty
   - people who don't get along with each other
2. Illustrate that angry feelings are normal. It is how the anger is directed or resolved that is most important.
3. Have each student write a personal list of things that upset or make him/her very angry. Use the "A Feeling You Just Can't Ignore" worksheet.
4. Allow sharing of complaints with classmates. Encourage students to personally evaluate whether the anger is warranted. Is there a just cause for anger?

STUDENT ACTIVITY SHEET

A FEELING YOU CAN'T IGNORE



... What really makes me mad ...

Don't you just hate _____

_____

_____

_____

Don't you just hate _____

_____

_____

_____

Don't you just hate _____

_____

_____

_____

Don't you just hate _____

_____

_____

_____

Don't you just hate _____

_____

_____

_____

SUPPLEMENTARY RESOURCES

TEACHER:

Canfield, Jack and Wells, Harold. 100 Ways to Enhance Self-Concept in the Classroom, A Handbook for Teachers and Parents. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1976 (BICEP 2570).

What Do You Think? (Values) Filmstrips/Cassettes. Mahwaw, N.J.: Educational Reading Services, 1974 (BICEP 4027).

Timmermann, Tim and Ballard, Jim. Strategies in Humanistic Education, Vol. 3. Amherst, MA: Mandala Book, 1978, "Feelings," pp. 121-133 (BICEP 2506).

FOLLOW-UP ACTIVITIES

An additional activity could be to go over each of the "angry" situations and have students consider possible solutions.

Examples might include a situation where the student didn't get elected class president and was angry at the winner. Perhaps talking to the winner and sharing the disappointment might be a more healthy situation than trying to influence friends to show nonsupport for the newly elected president.

This activity sheet is adapted from a program developed by Project BICEP, Barnstable Public Schools.

DETAILS

Subject Area: Math

Grade Level: Intermediate

Curriculum Phase: Awareness/Exploration

Infusion Approach: Organizing career education activities around a subject area

Career Education Concept(s):

Economic Awareness

INSTRUCTIONAL OBJECTIVES

Having computed the cost of keeping a horse for a year, the students will estimate the cost of owning the horse or another pet for a year.

MATERIALS/RESOURCES

Prepared list of the cost of keeping a horse.

PROCEDURES

1. Have students calculate the following items necessary to keep a horse for one year:
   - hay - 15 pounds per day at $ per ton
   - grain - 50 pounds per week at $ per 100 lbs.
   - salt - 5 blocks at each (per year)
   - treatment for worms - two times per year at $ per treatment
   - shoeing - 4 times per year at $ per time
   - bedding - 3 bags of shavings per week at $ per bag
2. Have students list and compute the price of owning a pet for one year. (If some students do not own a pet, they can interview a neighbor or friend.)
3. Include medicine and veterinarian fees, licenses and tag costs in your list.

PROCEDURES (continued)

VARIATIONS:

If students (either collectively or individually) have greater knowledge and access to information about animals other than a horse, this activity can be adapted as long as the computing of costs for the care, upkeep, and health of the animal is not altered.

SUPPLEMENTARY RESOURCES

TEACHER

Educational Reading Services, My Father's A Veterinarian (Filmstrip and Cassette). Mahwah, NJ, 1974 (BICEP 4023k).

Educational Reading Services, Working With Animals (Filmstrip and Cassette). Mahwah, NJ, 1975 (BICEP 4022).

STUDENTS

Gillum, Helen L. Looking Forward to a Career, Veterinary Medicine. Minneapolis, Minn.: Dillon Press, 1976 (BICEP 9110).

Van Tuyl, Barbara. Select, Buy, Train, Care for Your Own Horse. New York: Grosset & Dunlap, 1969 (Hyannis East).

"Zeroing In, Veterinarians". Highwood, Ill., Curriculum Innovations, Inc., Career World I, Vol. 5, No. 3, Nov. 1976 (BICEP).

FOLLOW-UP ACTIVITIES

Students at the elementary level always seem to have an intense interest in animals. A visit to a stable or riding academy can provide the knowledge necessary for computing costs for a horse's care.

This activity sheet is adapted from a program developed by Project BICEP, Barnstable Public Schools.

DETAILS		Career Education Concept(s):
Subject Area:	Math & Science	Decision-making
Grade Level:	Primary	Employability Skills
Curriculum Phase:	Awareness	
Infusion Approach:	Organizing career education activities around a subject area	

INSTRUCTIONAL OBJECTIVES

Students will graph weather changes for a month using symbols to indicate a variety of weather conditions.

MATERIALS/RESOURCES

"Weather Graph Experts" Worksheet
Crayons
Magic Markers
Weather Charts and Maps from News Media (optional)

PROCEDURES

1. Begin activity by discussing how weather is reported in newspapers, on television and other printed materials. Discussion should include that the weather is charted from day to day to help a variety of people in their jobs. These people might include:

farmers	motel/hotel owners	construction workers
airline pilots	meteorologists	street vendors
road workers	taxi drivers	landscape workers

2. Have students list the ways that they have seen the weather shown in print. These ways might include graphs, colored maps on television, sign languge displayed for deaf viewers, and radar scans on television.

3. Suggest that the students keep a weather graph of their own for a period of one month.

PROCEDURES (continued)

4. Discuss the types of symbols which would be appropriate for use in the graph. As the symbols are discussed, they can be placed in the top section of the graph on the Student Activity Sheet as a reminder for the students.

5. Discuss how the chart will affect their lives: by helping them to plan outdoor activities, by noticing patterns in the weather and how these patterns affect people's personalities, by giving them clues as to what to wear for different weather conditions, and by helping them roleplay the work of a meteorologist.

SUPPLEMENTARY RESOURCES

TEACHER

Farnette, Cherrie et al. Cents-Abilities. Nashville, Tenn., Incentive Publications, Inc., 1979 (BICEP 3136).

Forte, Imogene et al. Center Stuff for Nooks, Crannies and Corners. Nashville, Tenn., Incentive Publications, Inc., 1973, "Graph the Giraffe," pp. 300-308 (BICEP 3040).

"Special Report," Project GROW K-2 Activity Cards, #19. Florida State Department of Education, 1975 (BICEP 3094).

The K-3 Hand Book. Illinois State Board of Education, 1977, p. 14 (BICEP 3113).

FOLLOW-UP ACTIVITIES

Students may wish to visit a farmer to learn how weather affects his/her crops or plan to visit any of the other types of job situations which are listed in procedure #1.

Students may wish to organize their own weather show and record it on the school intercommunication system or in the school daily bulletin as part of their contributions to the day's news events.

This activity sheet is adapted from a program developed by Project BICEP, Barnstable Public Schools.

STUDENT ACTIVITY SHEET

WEATHER GRAPH EXPERTS

SUNNY	RAINY	SNOWY	CLOUDY	UNSETTLED
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY
MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY

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Arkansas State Department of Education, ...And what are you planning to be when you grow up? A Guide for Career Education in the Primary Levels. Little Rock, Arkansas, 1979. (ED 203160)

Benson, Arland et al., Communication, A Career Education Learning Package for Intermediate Level. Benson, Carlson, Larsen Publ., 1976.

Project Bicep, An Approach to Career Education. Career Education Resource Center, Barnstable High School, 744 West Main Street, Hyannis, Mass. 02601.

Project Bicep, A Guide to Organizing a Community Involvement Program. Career Education Resource Center, Barnstable High School, 744 West Main Street, Hyannis, Mass. 02601.

Project Bicep, K-6 Career Awareness Curriculum Model. Language Arts. Career Education Resource Center, Barnstable High School, 744 West Main Street, Hyannis, Mass. 02601.

Project Bicep, K-6 Career Awareness Curriculum Model. Mathematics. Career Education Resource Center, Barnstable High School, 744 West Main Street, Hyannis, Mass. 02601.

Borowsky, George et al., Yellow Pages of Learning Resources. The MIT Press, Cambridge, MA., 1978.

Bromfield, Sandra and Kilmurray, James A., Career Education Activity Guide, Schema, Inc., Boston, MA, N.D.

Brown, Alan H., Project DELTA: Developing Elementary Learning Through the Arts-Curriculum Outline. Seekonk, MA. Public Schools, 1978.

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Cashmere Peshastin-Dryden School Districts, Career Education Curriculum Guide, Elementary, K-5. Washington State Coordinating Council for Occupational Education, Vocational Education Division, 1974.

Casteel, J. Doyle, Learning to Think and Choose: Decision Making Episodes for the Middle Grades. Goodyear Publishing Co., Inc., Santa Monica, CA., 1978.

Coloma Community Schools, A Few of Our Favorite Things, Career Develop. Curriculum Units for the Elementary Classroom. Coloma, MI., 1977.

Coloma Community Schools, Our Group and Me, Career Development Curriculum Units for the Elementary Classroom. Coloma, MI., 1977.

Cooper, Irene, Decisions and Values, Intermediate Level. Mesa, Arizona Public Schools.

Cory, Beverly, Birdseye View of Language Arts. Fearon Pitman Publ., Inc., Belmont, CA., 1977.

Curwin, Richard and Geri, Developing Individual Values in the Classroom. Learning Handbooks, Palo Alto, CA., 1974.

T.E.C., Elementary Career Education Orientation and Resource Manual. The Education Cooperative, c/o Memorial School, Eliot Street, So. Natick, MA., 01760, N.D.

Farnette, Cherrie et al., People Need Each Other, A Social Awareness Activity Book. Incentive Publications, Inc., 1979.

Fiendach, Nancy et al., Career Guidance: Self Awareness Level One. Mesa, Arizona Public Schools, 1974.

Frank, Marjorie, If You're Trying to Teach Kids to Write, You've Got to Have This Book. Incentive Publ., 1979.

Hamilton, Jack A. & Leffler, Jeanne, Project Cap. Boston Mountains Educational Cooperative, Greenland, Arkansas. American Institutes for Research in the Behavioral Sciences, Palo Alto, CA., 1978.

Herron, Kay, Positive Thinking Exercises-Happy Thinking. Teaching Stuff, Glendale, CA., 1975.

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Jenkins, Jeanne and MacDonald, Pam, Growing Up Equal, Activities and Resources for Parents and Teachers of Young Children. Prentice-Hall, Inc., 1979.

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Ross, John D., Many Thousand Word...Work Pictures. Project EQUALITY Seattle, WA., 1976.

Simon, Sidney B., Meeting Yourself Halfway, Thirty One Values Clarification Strategies for Daily Living. Argus Communications, Niles, Ill., 1974.

Springfield Public Schools, Career Awareness, Kindergarten, Activities for Infusing Career Awareness in the Curriculum. Springfield, Mass.

Springfield Public Schools, Career Awareness, Grades 1 and 2, Activities for Infusing Career Awareness in the Curriculum. Springfield, Mass.

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CHAPTER V

SAMPLE ACTIVITIES FOR JUNIOR HIGH SCHOOL

The exploratory curriculum phase applies at the junior high level. At this age, young adolescence, students' interests are beginning to stabilize. They begin evaluating subjects, identifying preferences, and making some choices which will influence or even determine options throughout their lives. You will notice an increased interest in occupations.

During this exploratory phase use concrete experience, first hand observation and structured activities to help students explore a wide range of career options within their interest areas. This type of exploration is particularly important because the tentative choices students make at this age, while not final or irreversible, set a direction for the high school years. Also, you should help students become more aware of the relationship between what they learn in school and the kinds of careers they are considering. This, again, will help them in choosing the courses they want to take in high school.

Economic awareness is also critical. Adolescents are often very materialistic. They need help in learning about the relationship between work, money, and lifestyles. Many students at this age are beginning to get their first taste of "work experience" through baby-sitting, paper delivering, etc. They need to learn how to manage money and budget.

In addition, students are just beginning to assert their own values while still maintaining a sense of belonging to a peer group. This stage of development is still a period of identity formation and you should emphasize further development of self-awareness, interests and abilities, and the application of decision-making skills.

Career education at the junior high school level should provide students with assistance in identifying career possibilities, opportunities for exploration of occupations, practice in basic skills, economic awareness, and in identifying their own aptitudes and abilities. On the following pages are samples of career education activities for the junior high level, selected from career education programs in Massachusetts which have been shown to be effective, inexpensive, and easily adaptable within "basic" education content areas.

SAMPLE JUNIOR HIGH LEVEL CAREER EDUCATION ACTIVITIES

Subject	Career Concept(s)	Page
Home Economics	• Self-Awareness • Career Awareness • Educational Awareness	41
Science	• Self-Awareness • Career Awareness	43
English	• Career Awareness • Skill Awareness • Basic Competence • Appreciations and Attitudes	45
History	• Self-Awareness • Career Awareness • Economic Awareness	47
Business Math	• Career Awareness • Employability Skills • Economic Awareness • Educational Awareness	49

DETAILS

Subject Area: Home Economics

Grade Level: Junior High

Curriculum Phase: Exploratory

Infusion Approach: Organizing a subject area around career education activities

Career Education Concept(s):

Self-Awareness

Career Awareness

Educational Awareness

INSTRUCTIONAL OBJECTIVES

In a report to the class:

1. Students will be able to list at least five local agencies where people can go for help in solving their problems.
2. Students will be able to list at least five careers in human services.
3. Students will be able to describe the education required for each of the five careers they have listed.

MATERIALS/RESOURCES

Newspapers from local towns or cities
Telephone book
Visitors to the classroom from: religious organizations, social agencies
Clinics or hospitals which have functioning human service programs

PROCEDURES

1. Discuss with class the fact that almost all people have problems at some time in their lives. Suggest ways and solicit suggestions from students about resources available to people who have problems. Help students discern the many careers related to counseling.
2. If possible, bring in a counselor from one of the above organizations to explain to students the role of a counselor, the career opportunities in their field, and the educational requirements of that career.

PROCEDURES (continued)

3. Assign students the task of exploring five careers in the human service areas including educational requirements. Have students report on careers in class.

This activity sheet is adapted from a program developed by Milford Middle School, Milford, MA.

DETAILS	
Subject Area:	Science
Grade Level:	Junior High
Curriculum Phase:	Exploratory
Infusion Approach:	Unit

Career Education Concept(s):

Self-Awareness

Career Awareness

INSTRUCTIONAL OBJECTIVES

The student will:

1. Understand the biological problem of the disease malaria.
2. Begin to learn about the various occupations needed to solve a problem like this.
3. Justify why certain people would be needed and why others would not.
4. Learn what different people do in various occupations using the problem of malaria as a stepping stone.

This excercise could also be done with any biological problem, or with each group taking a different one. This way many more careers could be brought in, e.g. overpopulation, pollution, etc.

MATERIALS/RESOURCES

BSCS Biological Science, yellow version.

Scientific American, "The Clock of the Malarial Parasite," Vol. 222, June 1970, p. 129.

PROCEDURES

1. Have students read Chapter 1 in the BSCS yellow version of Biological Life Science. This contains a biological problem, malaria.
2. Also assign the reading of "The Clock of the Malarial Parasite" cited in "Materials/Resources."
3. Discuss the problem of malaria and how it is spread.

PROCEDURES (continued)

4. After the students are well into the biological problem of malaria, have them divide up into groups to discuss what types of people they would need to work on a problem like this.

5. A list of various types of people could be given where the group would have to decide on the five most important for working out a problem like this.

6. Then each group would try to justify their choices and decide as a group who would be needed.

This activity sheet is adapted from a program developed by The Educational Collaborative, D. Pietro, Natick School.

DETAILS

Subject Area: English

Grade Level: Junior High

Curriculum Phase: Exploratory

Infusion Approach: Unit

Career Education Concept(s):

Career Awareness

Skill Awareness & Basic Competence

Appreciation & Attitudes

INSTRUCTIONAL OBJECTIVES

Students will write a nonfiction report: a review, essay or newspaper article demonstrating their awareness of the variety of occupations involved in a TV production. Students will develop a greater ability to look more sensitively at television.

MATERIALS/RESOURCES

TV show "The Muppets" or any other weekly show
Interview with or visit by someone connected with a TV show

PROCEDURES

1. Discuss leisure time experiences and variety of occupations involved in these pursuits.

2. Have students watch a weekly TV show for 4 weeks in a row.

3. 1st Week: Discuss kind of show. What makes it humorous? How does it instruct? What is the message of theme? What does it say about our civilization?

4. 2nd Week: Discuss intoneal activities--look at lighting, setting, props, music, direction; identify the character of real people as compared to puppets.

5. 3rd Week: Discuss how show is prepared; selling the show; writing ads; writing reviews; contacting guests; secretaries, agents.

6. 4th Week: Analyze show itself--number of characters and what makes the unique dress, voice, costume. Look at writers, actors. What creates show's appeal?

PROCEDURES (continued)

7. Students write a short paper on one of the topic areas discussed during the previous weeks, emphasizing a specific occupation or job related to the TV show.

This activity sheet is adapted from a program developed by the Educational Collaborative, Mary Kirk, Wellesley Junior High School.

DETAILS

Subject Area: History

Grade Level: Junior High

Curriculum Phase: Exploratory

Infusion Approach: Organize career education activities around subject area

Career Education Concept(s):

Self-Awareness

Career Awareness

Economic Awareness

INSTRUCTIONAL OBJECTIVES

Students will demonstrate their understanding of:

1. How geography affects economy
2. How geography affects occupation choices
3. How sectional differences arise from geographical differences

by reporting to class.

MATERIALS/RESOURCES

Three large pictures of land: in southern plantation on river; rugged, rocky New England, riverside near Hudson River Valley. Use life series or American Heritage books.

Text: Reading on differences between southern, northern, and middle Atlantic colonies.

PROCEDURES

1. Divide the class into three groups giving each group one picture. The pictures will represent the three geographic areas of the east coast of the United States (but students do not know this).

2. Have each group decide how they will eat, whether they will hunt or fish, whether they will plant crops to seel or try to live off the land only, how they will shelter themselves, how they will travel and trade goods. What are the essential occupations?

PROCEDURES (continued)

3. Tell class that each picture represents a different section of Colonial America. Discuss: What might be differences they would have on taxes, kind of government, etc.?

4. Have each group report findings to class.

This activity sheet is adapted from a program developed by the Educational Collaborative, Carmean, Weston.

DETAILS

Subject Area: Math (Business)

Grade Level: Junior High

Curriculum Phase: Exploratory

Infusion Approach: Organize career education activities around subject area

Career Education Concept(s):

Career Awareness

Employability Skills

Economic Awareness

Education Awareness

INSTRUCTIONAL OBJECTIVES

1. Students will be able to determine time elapsed.
2. Students learn how to read a rate card.
3. Students learn to determine advertising bills.
4. Students become aware of occupations and the job requirements involved in advertising.

MATERIALS/RESOURCES

Clock
Radio
Mathematics Around Us, Bolster et al., Scott Foresman, p. 12
Overhead projector (with transparency of rate card from supplementary list)

PROCEDURES

1. Discuss timing in minutes, seconds, etc. (recall Olympics).
2. Use programming log (page 12) and record listing (page 13) to decide when each record should be played.
3. Use radio and clock to time records playing time, ending time, starting time.
4. Assignment: Listen to radio for 15 minutes; record starting and ending times for at least 3 records. Find playing time.

PROCEDURES (continued)

5. Check homework (playing time of 3 records).

6. Use rate listing to determine bill for advertiser, i.e.,
   The Record HOR
   1 min = $35
   10 sec = $ 7
   $42

7. Students work individually to determine bill for other advertisers (listed on page 12).
   Page 13, #1-13, solve and check.

8. Listen to radio for 15 minutes: (girls - prime time, boys - non-prime time).

9. List advertisers and time of commercial.

10. Write bill for that ad time.

This activity sheet is adapted from a program developed by the Educational Collaborative, Eileen Heneberry, Norwood South.

B I B L I O G R A P H Y

RESOURCES FOR JUNIOR HIGH SCHOOL LEVEL CAREER EDUCATION

Career Education Department, Project ICE (Interdisciplinary Curriculum Education) Career Education Curriculum Activities Grades 7 & 8. Milford Middle School, Milford, MA.

Carkhuff, Robert, et al., Getajob. Human Resource Development Press, Amherst, Mass., 1975.

The Education Cooperative, Career Activities for Junior High School English. T.E.C. c/o Memorial School, So. Natick, Mass.

The Education Cooperative, Career Activities for Junior High School Math. T.E.C., c/o Memorial School, So. Natick, Mass.

The Education Cooperative, Career Activities for Junior High School Science. T.E.C., c/o Memorial School, So. Natick, Mass.

The Education Cooperative, Career Activities for Junior High School Social Studies. T.E.C., c/o Memorial School, So, Natick, Mass.

Friel, et al., The Art of Developing a Career. Human Resource Development Press, Amherst, Mass., 1974.

Progue, Irene, Career Awareness Unit, 8th Grade. T.E.C., c/o Memorial School, So. Natick, Mass.

Raymond, Carolyn D., Career Education Infusion: A Review of Selected Curriculum Guides for the Middle School. Ohio State University, Columbus, Ohio, 1980.

Ritvo, Phyllis T. Comp.; and others, An Annotated Bibliography of Selected Curriculum Materials Arts and Humanities Occupational Cluster. Technical Education Research Center, Cambridge, Mass., 1975.

Tocchi, Robert M., Project Ice, Interdisciplinary Curriculum Education, Career Education Curriculum Activities Grades 7 & 8. Milford Middle School, Milford, Mass., 1980.

Traditional vs. Non-Traditional: Expanding Career Choices, Middle School Unit. Bloomington, Indiana: Indiana State Office of Occupational Development, 1981.

YWCA, Boston. Connections. A Program for Middle School Students About Women and Work and Skills for Good Jobs, 1981.

C H A P T E R V I

SAMPLE ACTIVITIES FOR HIGH SCHOOL

The preparatory curriculum phase applies at the high school level. However, teachers must also be flexible and continue to incorporate aspects of both awareness and exploration. Students at this age and grade level are becoming increasingly serious about their career plans. In order to help them decide about possible careers and acquire the necessary skills and education for pursuing their preferred careers, three primary needs must be considered. First, all students need some skill training in specific occupational areas, whether or not they choose to have a long-term career in that area. Second, all students need to be prepared to make future career decisions--to have good problem-solving skills and to have the ability to make rational choices about college, further training, geographical mobility, income aspirations, and life style. Third, students need increasingly personalized guidance, support, and assistance throughout this exploratory and preparatory process.

Career education at the high school level should assist students in preparing for life after school. The major career education considerations at this stage are: providing students with some employable skills and teaching them how to use all available resources to make informed choices throughout their lives.

On the following pages are samples of career education activities for the high school level, selected from programs in Massachusetts which have been shown to be effective, inexpensive, and easily adaptable within "basic" education content areas.

SAMPLE HIGH SCHOOL LEVEL CAREER EDUCATION ACTIVITIES

Subjects	Career Concepts	Page
Industrial Arts	• Career Awareness	55
English/Social Studies	• Career Awareness • Appreciation and Attitudes	56
History	• Self-Awareness • Career Awareness • Appreciations and Attitudes • Economic Awareness	58
Science	• Basic Competence • Employability Skills	60
Business	• Decision-making • Appreciations and Attitudes • Self-Awareness • Career Awareness	62
Foreign Language	• Career Awareness • Educational Awareness • Basic Competencies	64
Home Economics	• Career Awareness • Skill Awareness & Basic Competence	66
English	• Career Awareness • Educational Awareness • Basic Competencies	69

DETAILS

Subject Area: Industrial Arts

Grade Level: High School

Curriculum Phase: Exploration

Infusion Approach: Organizing career education activities around a subject

Career Education Concept(s):

Career Awareness

INSTRUCTIONAL OBJECTIVES

Students will demonstrate their awareness of career opportunities related to Plastics Technology by submitting a 3-page report on a job they have researched.

MATERIALS/RESOURCES

Exploring the World of Plastics

Dictionary of Occupational Titles

Career Guide for Plastics Technology

PROCEDURES

1. The teacher presents students with an introduction to careers in plastics, including:
   - historical background of industry;
   - working conditions;
   - wages; and
   - outlook.
2. Each student will research a job title related to the plastics industry which they may wish to pursue.
3. Each student will submit a 3-page report on the job they researched.
4. The class will create and produce a bulletin board "Careers in Plastics."

This activity sheet is adapted from a program developed by:
Richard Newell, Quabbin Regional High School.

DETAILS

Subject Area: English/Social Studies

Grade Level: High School

Curriculum Phase: Exploration

Infusion Approach: Organizing career education activities around a subject

Career Education Concept(s):

Career Awareness

Appreciation & Attitudes

INSTRUCTIONAL OBJECTIVES

The student will:

1. Discuss the many careers and roles related to farming.
2. Become aware of the social inequities brought up in The Grapes of Wrath.
3. See the role played by the novelist as social critic.
4. Become aware of the life style, the frustrations, and hopes of the migrant farm workers.
5. Develop oral skills.

MATERIALS/RESOURCES

The Grapes of Wrath, John Steinbeck

Harvest of Shame (film, C.B.S. Documentary)

Working, Studs Terkel, pp. 25-57

PROCEDURES

1. Students read: The Grapes of Wrath or Of Mice and Men or When Legends Die.
2. Students view the film Harvest of Shame (see attached guide).

PROCEDURES (continued)

3. Students prepare a 5-10 minute talk or write an essay on a topic such as:
   - migrant farm workers in Massachusetts or New England;
   - history of the migrant farm worker (history, current problems, future prospects);
   - careers in farm-related industries.

SUPPLEMENTARY RESOURCES

Harvest of Shame study guide:

The student will be given the guide before viewing the film. After viewing the film, the guide can be used to direct class discussion.

1. What are the implications of the title of the film?
2. What major criticisms are presented about the farm owners and their attitudes toward migrant workers?
3. What is the never-ending cycle of the migrant worker?
4. Why can the workers never break out of the cycle of being migrant workers?
5. What problems cause the workers to be doomed, for the most part, to a life of poverty, futility, and hopelessness?
6. How has "big business" contributed to the tragic lot of these workers?
7. What hope is offered through education?
8. What other avenues of hope are open to migrant workers and their children?
9. What are the present conditions of migrant farm workers?

This activity sheet is adapted from a program developed by Wayland District.

DETAILS

Subject Area: History

Grade Level: High School

Curriculum Phase: Exploration/ Preparation

Infusion Approach: Organizing career education activities around subject

Career Education Concept(s):

Self-Awareness

Career Awareness

Appreciation & Attitudes

Economic Awareness

INSTRUCTIONAL OBJECTIVES

Students will:

1. Become aware of the problems faced by the poor in obtaining public aid.
2. Become aware of programs available to help people today.
3. Become aware of possible career opportunities in public service.

MATERIALS/RESOURCES

"A Case History of A Depression Family," A New History of the U.S., E. Fenton (pp. 626-631)

Contact persons:

Division of Employment Security

PROCEDURES

1. Students read a case study of an American family of the 1930's and discuss the problems it faced in struggling to survive.
2. Students will then be given a chance to answer the question, "What if this occurred today?"
3. Divide students into groups to visit:
   - The Division of Employment Security
   - The Social Security Administration
   - The Massachusetts Department of Welfare

PROCEDURES (continued)

4. Each group develop a list of questions to ask at each of these offices. Included are: what services are offered; who are the clients; what kinds of employees, what kinds of training do employee's have.

   or

   Alternatively, a representative from each office may be asked to come to the class and be interviewed by the students.

5. Students return and report how these agencies might help people and the kinds of jobs available in public service

This activity sheet adapted from a program developed by Wayland District.

DETAILS

Subject Area: Science

Grade Level: High School

Curriculum Phase: Preparation/ Exploration

Infusion Approach: Organizing a career education activity around a subject

Career Education Concept(s):

Career Awareness

Basic Competency

Employability Skills

INSTRUCTIONAL OBJECTIVES

As a result of participating in this exercise, the student will:

1. Use a computer in the solution of biological problems.
2. Explain what happens during the photosynthetic process when certain variables are changed.
3. Show an understanding of the relationship between photosynthesis and:
   a. production of food
   b. replenishment of oxygen to the atmosphere by passing a simple test.
4. Discuss several careers where this principle might apply.

MATERIALS/RESOURCES

1. Computer terminal
2. Computer Program - Project Local REF: S-187 BASIC Photosynthesis
3. Text: Biological Science - An Inquiry into Life (Yellow Version BSCS) Chapter 15 - "Photosynthesis - The Link Between Two Worlds," pages 279-295.

PROCEDURES

1. Student should first study about photosynthesis and its importance to man.

2. Student should proceed through the computer program.

3. Student should make a list of occupations which might involve the use of this concept.

This activity sheet is adapted from a program developed by D. Saltmarsh, Westwood.

DETAILS

Subject Area: Business

Grade Level: High School

Curriculum Phase: Preparation/ Exploration

Infusion Approach: Organizing a career education activity around a subject

Career Education Concept(s):

Decision-making

Appreciation & Attitudes

Self-Awareness

Career Awareness

INSTRUCTIONAL OBJECTIVES

As a result of participating in this exercise, students will:

1. increase their awareness of their own habits, attitudes, and behavior as they relate to career success; and

2. Develop positive attitudes and desirable habits to aid them in career success.

MATERIALS/RESOURCES

1. Teaching Office Procedures Today, Illa W. Atwood

2. Human Relations at the Office, Louis Mason and Jeri Young

PROCEDURES

1. Students read selected case problems and discuss possible solutions to the problems. These case studies will deal with the following areas: business-like attitudes, personality development, office procedures, communication, ethics and conduct, inter-personal relations, job supervision, job grievances, and health and grooming.

2. Students are given a class project (typing form letters, envelopes, labels, etc.) and told to complete the project in two class periods. Students are left to their own resources to assign work and get the project completed.

3. At the completion of the project students critique the work process and discuss what they learned.

PROCEDURES (continued)

4. To develop good attendance habits, a simulated pay check will be issued to students each week based on the amount of time worked (attended class).

5. Students maintain a bulletin board pertaining to desirable personality and character traits for career success.

This activity sheet is adapted from a program developed by Sandra Plumb, Quabbin Regional High School.

DETAILS

Subject Area: Foreign Language: Spanish

Grade Level: High School

Curriculum Phase: Exploratory

Infusion Approach: Organize a subject around a career education objective

Career Education Concept(s):

Career Awareness

Educational Awareness

Basic Competence

INSTRUCTIONAL OBJECTIVES

Students will:

1. Develop awareness of duties and responsibilities of customs inspectors.
2. Develop awareness of educational and personal qualifications.
3. Know and use 25 vocabulary words related to this career.

MATERIALS/RESOURCES

Speaker: Customs Inspector

U.S. Civil Service Commission, Washington, D.C. 20415

Bureau of Customs, Personnel Division, 2100 K St., Washington, D.C. 20226

Career Packet, Career Opportunities in Foreign Language - Houghton Mifflin Co., 1975

PROCEDURES

1. Students prepare and discuss a "job description" of a customs inspector including roles and responsibilities. Speaker invited (if at all possible).
2. Class discusses requirements for becoming a customs inspector. Reference can be: Career Packet Career Opportunities in Foreign Languages, Houghton Mifflin Co., 1975.

PROCEDURES (continued)

3. Student will compose a list of 25 Spanish words that relate specifically to becoming a customs inspector.

SUPPLEMENTARY RESOURCES

Interagency Board of U. S. Civil Service Examiners for Washington, D.C., 1900 E. Street, NW, Washington, D.C. 20415

This activity sheet is adapted from a program developed by Nancy Belsky, Wayland District.

DETAILS

Subject Area: Home Economics

Grade Level: High School

Curriculum Phase: Preparation

Infusion Approach: Organizing career concepts around a subject area

Career Education Concept(s):

Career Awareness

Skill Awareness & Basic Competence

INSTRUCTIONAL OBJECTIVES

The student will:

1. make and sell apple pies;
2. list a variety of jobs relating to the field of home economics.

MATERIALS/RESOURCES

Community Resources

Cookbook

Food and supplies for baking apple pies

Food production sheets (see Supplementary Resource page)

PROCEDURES

1. Groups of 3 and 4 students design posters and write announcements to advertise apple pie sale.
2. Take a field trip to a local apple orchard to purchase apples in quantity. Students pick apples if permissable.
3. Using Food Production Sheet, decide on the number of pies to be made and figure the amount and cost of ingredients needed.
4. Prepare pie crusts in assembly line fashion:
   - make dough
   - roll dough
   - wrap and store

PROCEDURES (continued)

5. Prepare apples in assembly line fashion:

   - cut apples
   - mix with sugar mixture

   Put pie together in assembly line fashion:

   - pie shell
   - apples
   - margarine
   - top crust
   - decorate and brush tops
   - cook in oven
   - store in pie boxes

6. Distribute apple pies to customers. Collect money.

7. Tally the profit received by subtracting the total money made from sale from the total cost of project.

8. Visit a wholesale bakery to observe pie making procedures. Point out the various employees and their type of work. Each student to observe closely the particular job they did in class.

SUPPLEMENTARY RESOURCES

FOOD PRODUCTION SHEET

PRODUCT: Apple Pies

Recipe Source: Cookbook

Recipe Yield: 1

Actual Yield: 1

Ingredients Needed	Recipe Yield		Actual Yield	
	amount	cost	amount	cost
pie crusts	2	.50	20	5.00
apples	3 lbs.	.80	30	8.00
sugar	1/2	.02	5c	.20
cinnamon	1 tbs.	.01	10 tbs.	.10
flour	2 tbs.	.01	20 tbs.	.10
Supplies Needed				
pie plates	1	.25	10	2.50
pie boxes	1	.20	10	2.00

This activity sheet is adapted from a program developed by Nancy Manning, Worcester Public Schools.

DETAILS

Subject Area: English

Grade Level: High School

Curriculum Phase: Exploratory

Infusion Approach: Organizing a subject around a career education concept

Career Education Concept(s):

Career Awareness

Educational Awareness

Basic Competencies

INSTRUCTIONAL OBJECTIVES

The student will:

1. Discuss in writing the duties of a chosen career.
2. Discuss the requirements for a chosen career.
3. Know and use 25 words related to a career.
4. Discuss at least two articles related to a career.
5. Write a report, discussing some aspect of a career in detail.

MATERIALS/RESOURCES

Career Briefs

Magazines

PROCEDURES

The following activities are to be accomplished within a two-week period:

1. Paragraph Writing: In a well-organized paragraph, students will prepare a "job description" of a career they have selected. They should check cluster list to see in which area the career is designated.
2. Paragraph Writing: In a well-organized paragraph, students discuss the requirements for the career, in their chosen fields. They should consider such things as education, background and previous work experience.

PROCEDURES (continued)

3. Vocabulary: Students select and define 25 vocabulary words which relate specifically to their career area. They use 15 of these words in definitive sentences.

4. Selection of Main Ideas: Students read at least 2 newspaper or magazine articles, or one book either fiction or non-fiction, which relates directly to their chosen career. They will list the main ideas of these articles (or book) in such a way that another person would be able to tell, by checking his list, exactly what is included in the articles.

5. Project: The students will prepare a written report, or essay, on a specific area of the career they have selected. The project will be decided by both the student and the teacher. For example, a person doing a project on "animal care" in the Personal Service Cluster, might write an essay on how to groom a horse, or on five different breeds of dogs. They might also report on what specific jobs are available in the area of "animal care." A person interested in being a "model" in the Marketing and Distributive Cluster, might write an essay on the diet and exercise required to keep a model in condition.

This activity sheet is adapted from a program developed by Natick District.

B I B L I O G R A P H Y

RESOURCES FOR HIGH SCHOOL LEVEL CAREER EDUCATION

The Education Cooperative, Career Activities for High School Foreign Language. The Education Cooperative, c/o Memorial School, So. Natick, Mass. 01760.

The Education Cooperative, Career Activities for High School English. The Education Cooperative, c/o Memorial School, So. Natick, Mass. 01760.

The Education Cooperative, Career Activities for High School Social Studies. The Education Cooperative, c/o Memorial School, So. Natick, Mass. 01760.

The Education Cooperative, Career Activities for High School Math. The Education Cooperative, c/o Memorial School, So. Natick, Mass. 01760.

Lieberman, Leo, 21 Lesson Plans in Career Exploration. Career Exploration Services, 17 North Gateway, Winchester, Mass., 1978.

Quabbin Regional High School, TICCO (Teacher Infusion of Classroom Career Orientation). Quabbin Regional High School, South Barre, Mass. 1980.

Simon, Sid, Howe, Leland and Kirschenbaum, Howard, Values Clarification. Hart Publishing Co., New York, 1972.

Traditional vs. Non-Traditional: Expanding Career Choices, High School Unit. Bloomington, Indiana: Indiana Office of Occupational Development, 1981.

Winn, Charles, editor, Careers in Focus. McGraw-Hill, New York, 1976.

C H A P T E R V I I

OTHER RESOURCES AND CONSIDERATIONS

The previous three chapters cover essentially standard curriculum areas for grades K-12. In this chapter we would like to state the importance of considering some additional areas: non-traditional occupational exploration, special needs students, and disadvantaged students. We provide a few sample activities for career education programs that focus on the needs of each of these groups within the context of mainstream education.

Non-Traditional Occupational Exploration

In pursuing career education activities with students, you must always be aware of avoiding sex and race stereotyping. You should encourage students to explore all career options and not be bound by traditional roles. Non-traditional occupational exploration means helping students understand the contributions of various cultures, ethnic groups, men and women to our society. It also means helping students to discern stereotypes and to accept the changing roles of all people in this country.

As a teacher it is your responsibility to assure that equity concepts are present in all your students' career education activities. This often means that you must examine your own preconceived stereotypes and assumptions. Assuring that your career education activities promote non-traditional occupational exploration can be as challenging to you as it is to your students.

On the following pages are several examples of lesson plans for different subject areas that directly address the issues of stereotyping and non-traditional occupational exploration.

DETAILS

Subject Area: Home Economics

Grade Level: High School

Curriculum Phase: Exploratory

Infusion Approach: Organize subject around career education objective

Career Education Concept(s):

Educational Awareness

Career Awareness

INSTRUCTIONAL OBJECTIVES

Students will become aware of the effects of stereotyping.

MATERIALS/RESOURCES

Books and magazines with pictures, newsprint, magic markers

PROCEDURES

Session 1:

1. Students find pictures of: a child;
   an adult;
   a male individual;
   a female individual;
   a black individual; and
   a white individual.

2. Students discuss and list characteristics of each type of individual.

3. Students compare their list of characteristics with the actual characteristics of people identified in the pictures. Students discuss: (1) how easy it was to assign the traits; (2) how much they varied from the actual activities of the person in the story; and (3) that to know a person means looking at what the person does.

PROCEDURES (continued)

Session 2:

1. Students discuss and list on newsprint all the different groups that might be discriminated against in our society. The list should include: handicapped people,
   racial groups,
   ethnic groups,
   religious groups,
   fat people/skinny people,
   tall people/short people,
   old people/children,
   geographic/regional groups.

2. Students review list and identify specifically how each group is discriminated against.

3. Students discuss how such discrimination can be overcome.

NOTE: This exercise should become a creative "brainstorming" classroom discussion as students become more attuned to the hundreds of "little things" that make life more difficult for members of some of these categories.

Adapted from South High Community High School, Worcester, MA.

DETAILS

Subject Area: Math

Grade Level: High School

Curriculum Phase: Exploratory

Infusion Approach: Organizing a career concept around a subject

Career Education Concept(s):

Career Awareness

Basic Competencies

INSTRUCTIONAL OBJECTIVES

1. Students learn how to represent and interpret data.
2. Students become aware of the status of women scientists.

MATERIALS/RESOURCES

Women Scientists Data Sheet from:
WOMEN AND MINORITIES IN SCIENCE AND ENGINEERING
National Science Foundation Publication
U. S. Government Printing Office 038-000-00307

PROCEDURES

1. Students read data sheet.
2. Students read the following instructions:
   a. number of women who are scientists
   b. salary of female (choose scientific field)
   c. salary of male (choose scientific field as those chosen for women)
   d. compute the difference between the two salaries
   e. compute the percentage that the female salary is of the male salary
   f. number of minority people who are scientists
   g. number of minority scientists who are female
   h. compute the percentage of minority scientists who are female
   i. compute the percentage of the total number of scientists who are female and members of a minority group

PROCEDURES (continued)

3. Students discuss:

   a. Why do you think there are more male scientists than female scientists?

   b. Why do you think male scientists' salaries are greater than female scientists' salaries?

   c. Why do you think there are so few minority scientists?

   d. What other ways can you think of to present these data? (e.g., graphs, parts of circles)

Adapted from South Community High School, Worcester, MA.

DETAILS

Subject Area: Business

Grade Level: High School

Curriculum Phase: Exploratory

Infusion Approach: Organizing career concepts around a subject

Career Education Concept(s):

Career Awareness

Attitudes & Appreciations

INSTRUCTIONAL OBJECTIVES

Students become aware of sex-role stereotyping.

MATERIALS/RESOURCES

Presented in S.T.E.R.E.O. (Strategies, Techniques and Effective Resources for Equalizing Opportunities)
Arizona Department of Education
Division of Career and Vocational Education
Phoenix, Arizona 85007

PROCEDURES

1. Divide class into groups or teams.

2. Each team has 5 minutes to list as many famous people as they can think of.

3. Teams discuss list and answer following questions:
   a. Are there more men or women listed?
   b. What kinds of things are women famous for? What kinds of things are men famous for? What are the differences?
   c. Do students know anything about the people they listed or are they just famous names?
   d. Do students know more information about the men listed or the women listed?

PROCEDURES (continued)

e. Of the famous women mentioned, are they often known for their physical attractiveness or general "presence" (movie stars, models, newscasters) rather than for their achievements in, say, physics, business, or economic theory?

f. What are the famous men noted for? Is there a difference from the women?

g. Is there a difference in the way men and women are allowed and/or encouraged to pursue fame and success?

Adapted from North Community High School, Worcester, MA.

DETAILS

Subject Area: Language Arts, Social Studies

Grade Level: Elementary 3-6

Curriculum Phase: Awareness

Infusion Approach: Organizing subject around career concept

Career Education Concept(s):

Career Awareness

Appreciation & Attitudes

Basic Competencies

INSTRUCTIONAL OBJECTIVES

Students expand occupational perceptions.

Students expand vocabulary.

Students decrease sex-role stereotyping.

MATERIALS/RESOURCES

Magazines and newspapers students bring from home

Construction paper and glue

PROCEDURES

This is a 3-day activity.

Day 1:

1. Students cut out pictures showing people at work.
2. Students glue pictures on construction paper and arrange on bulletin board.

Day 2:

1. Students go over the pictures on the bulletin board and arrive at a job title for each.

PROCEDURES (continued)

Day 3:

Students pick out some of the pictures and give the job title and the skills required to perform the job. (NOTE THAT SKILLS ARE NOT BASED ON SEX) If a woman is shown the teacher asks the class if a man could do this job. *Note that the job title arrived at may have to be changed so that it is not restricted to a single sex. For example, "mailman" should be changed to "mail carrier."*

Students look for pictures of nontraditional workers. If pictures of nontraditional workers are not available in the magazines or newspapers, students should draw pictures in order to present a wider variety of role models in The World of Work. (Make the point that boys and girls can choose any work role.) This bulletin board can then be left on display for several weeks.

Adapted from Project Equality, Highline Public Schools, Seattle, Washington.

B I B L I O G R A P H Y

RESOURCES FOR NON-TRADITIONAL CAREER EDUCATION

Adell, Klein, Dole, A Guide to Non-Sexist Children's Books. Academy Press, Limited, 176 W. Adams Street, Chicago, IL 60603.

Ahlum & Fralley, Feminist Resources for Schools and Colleges: A Guide to Curricular Materials. The Clearinghouse on Women's Studies, Feminist Press, SUNY Old Westbury, Box 334, Old Westbury, NY 11568.

Asbury Park Board of Education, Expanding Career Choices for Students by Reducing Mathematics Anxiety. New Jersey State Department of Education, Trenton, New Jersey, 1979.

Cohen, Martha, Stop Sex Role Stereotypes in Elementary Education: A Handbook for Parents and Teachers. Connecticut Public Interest Research Group (Conn.PIRG), P.O. Box 1571, Hartford, CT 01601.

Feminists on Children's Media. Little Miss Muffet Fights Back. Book Mart, 162-11 Ninth Ave., Whitestone, NY 11357.

Johnson, Laurie Olson, ed., Non-Sexist Curricular Materials for Elementary Schools. The Clearinghouse on Women's Studies, The Feminist Press, P.O. Box 334, Old Westbury, NY 11568.

Macmillan Publishing Co., Inc., Guidelines for Creating Positive Sexual and Racial Images in Educational Materials. Macmillan Publishing Co., Inc., 866 Third Ave., N.Y., NY 10022.

Maryland State Department of Education, Baltimore, Career Education Resource Notebook. Office of Education (DHEW), Washington, D.C., 1974.

Miller, Casey & Swift, Words and Women. Anchor Books, Division of Doubleday Publishing Company, 245 Park Avenue, N.Y., NY 10017.

Southeastern Massachusetts University, Sex Equity in Career Education (K-8), Resource Guide. Division of Continuing Studies & Special Programs, North Dartmouth, Mass. 1979.

Stacey, Bereaud, Daniels, And Jill Came Tumbling After: Sexism in American Education. Dell Publishing Co., Inc., 1 Dag Hammerskjold Plaza. N.Y., NY 10017.

Women on Words and Images, Dick and Jane as Victims: Sex Stereotypes in Children's School Readers. Women on Words and Images, Box 2163, Princeton, NJ 08540.

Career Education for Disadvantaged Students

In working with disadvantaged students teachers must make a special effort to infuse career education concepts. Students are classified as disadvantaged because of deficiencies in reading, mathematical achievement, and income status. These students often lack strong role models and as a consequence have low expectations as to their future job potential. In developing career education programs for these students teachers must include an emphasis on non-traditional occupational exploration. It is also especially important to use an infusion approach that combines career awareness with basic competencies. Students need to understand how learning basic skills will affect their job potential. For the most part, teachers can use standard career education lesson plans (as outlined in previous chapters.

B I B L I O G R A P H Y

RESOURCES FOR CAREER EDUCATION FOR THE DISADVANTAGED

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Career Education for Special Needs Students

The major goal of educational programs for special needs students is to prepare these students to live as independently as possible. In working with mainstreamed special needs students teachers should use the same career education curriculum as with regular students. For students who are in substantially separate programs, teachers must often focus career education programs on more basic skills. The most important consideration in preparing a career education program for special needs students is not to limit students' options and to encourage students to think positively about their futures.

On the following pages are two sample career education lesson plans. The first is a lesson plan to be used with a substantially separate class; the second is for use in a class with mainstreamed special needs students.

DETAILS

Subject Area: Social Studies

Grade Level: Middle School 5-8, learning disabled students

Curriculum Phase: Awareness

Infusion Approach: Organizing a subject around career education concept

Career Education Concept(s):

Appreciations & Attitudes

Career Awareness

Basic Competencies

Educational Awareness

INSTRUCTIONAL OBJECTIVES

Students to differentiate between leisure and work.

Students to compile a list of possible leisure activities.

Students to state how aptitude, interests, and environment affect one's choice of leisure activities.

Students to identify the relationship between formal learning in school and leisure activities.

Students to describe how leisure activities may help to satisfy physical, intellectual, social, and emotional needs.

MATERIALS/RESOURCES

1. Pictures of people engaged in work and leisure activities taken from newspapers or magazines. You may wish to include pictures in which some people are at work while others are at leisure (e.g., a waiter serving dinners) and others that are ambiguous (e.g., someone riding a horse, or someone at a desk reading and writing). Also, be sure that disabled and minority men and women are shown in a wide variety of roles.

2. A timeline like the following:

Leisure Activities at this age	0-3 years	3-5 years	6-8 years	9-10 years	11 years	12 years	13 years

MATERIALS (continued)

3. Magazines, newspapers, paste, scissors, and paper.

4. Teacher-prepared workshop with school subjects in one column, leisure activities in the other, stamps, envelopes, and paper.

PROCEDURES

1. Using pictures of people in various situations, students identify the people working and at leisure.

2. Students prepare a scrapbook of people working and at leisure.

3. Students name or list activities they participate in frequently.

4. Students make a collage of outdoor leisure activities and indoor leisure activities.

5. Each student thinks of a particularly enjoyable leisure activity. Discuss as follows:

   a. How did you first become interested in the activity?
   b. What skills or talents are needed to do this activity successfully?
   c. Did anyone help you to be successful at the activity?
   d. Is what you learn in school related to this activity? If so, how?

6. Students do a timeline showing their most common leisure activities at various ages. Students look for leisure time activities that have remained constant in their lives and activities that have come and gone. Discuss reasons for these changes. What changes do students project for the future and why?

7. Give each child a list with leisure activities in one column and school subjects or skills in another. Have each student match the activity with the subjects or skills to which it is related.

8. Discuss why leisure activities are just as important as school and work activities for helping meet our needs. (They help us enjoy life, relieve frustration, use our creative talents, etc.)

9. Allow part of the day to be devoted to writing different states or countries (their Chambers of Commerce or local travel agencies) to learn about leisure activities available in these areas. Have students compare the information thus collected with similar information collected about their own community.

PROCEDURES (continued)

10. Students demonstrate activities and interests developed at home. Various art projects, science projects, music, etc. can be shown or demonstrated.

11. To expose the student to a variety of leisure activities, list many possible types on the blackboard. Arrange in groups of: outdoor, domestic, mechanical, social, crafts, independent, travel, service to others, and other. Then go through these and place tally marks beside the ones your students have participated in. Make a list on paper too. Ask the students to add to this list any other leisure activity they discover through research, or talking with family and friends.

12. Have small groups make charts similar to the following:

Leisure Activity	Need it May Fulfill
Monopoly	Intellectual (reads and remembers, follows rules) Social (plays with others) Emotional (makes feel smart)
Baseball	Physical (uses energy) Social (teamwork)

Adapted from Towards Individual Growth by Experiencing Reality by Cowan et al., Special School District of St. Louis County.

DETAILS

Subject Area: Language Arts

Grade Level: 4-6

Curriculum Phase: Awareness

Infusion Approach: Organizing a career concept around a subject area

Career Education Concept(s):

Basic Competencies

Attitudes & Appreciations

Career Awareness

INSTRUCTIONAL OBJECTIVES

Students identify handicaps and make personal observations regarding the portrayal of handicapped persons as shown in the media.

MATERIALS/RESOURCES

Newspapers

Observation Worksheet (attached)

Copies of TV Guide or weekly listings with descriptions of programming

Magazines

Experience chart paper

PROCEDURES

1. Students discuss any handicapping conditions they are aware of.
   Examples might include: loss of hearing
   loss of sight
   size (dwarf)
   artificial limbs
   use of wheel chair
   visible signs of retardation

2. If students are reluctant to join in discussion, the teacher should offer observations.

3. Students discuss and list how many times they have been handicapped persons on television, in the newspapers, or in magazine articles or advertisements.

PROCEDURES (continued)

4. Provide worksheet for students to give specificity to their independent observations.

5. Discuss categories included in the worksheet.

6. Leave a blank experience paper chart in an obvious location in the classroom for students to record immediate impressions during the three-day observation period.

7. For the next 3 days students observe media for examples of handicapped people. Students record what they see on their own worksheet and classroom sheet.

8. Continue discussion after the 3-day period has elapsed. Discussion should focus on the following questions:

   - Are disabled people fairly portrayed most of the time in the media?
   - If you were handicapped, would you be content with the media's portrayal of you and your handicap? Why or why not?
   - If "invisibility" is evident in the media, what does that tell us about the recognition we are giving these people?

STUDENT ACTIVITY SHEET

MEDIA OBSERVATION WORKSHEET

Do Handicapped People Get a Fair Shake?

Observer: _____	Day I	Day II	Day III
Type of Media Television			
Newspaper			
Magazine			
Situation News			
Advertisements			
Special Features or Programs			
How many times during the day did you see a handicapped person in the media?			

List adjectives you heard or read in relation to handicapped persons:

Adapted from Project BICEP, Barnstable Public Schools.

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